



Machine Id  
**DALE ROBINS**  
Component  
**Starboard Genset**  
Fluid  
**CHEVRON URSA SUPER PLUS 40 (3 GAL)**

**RECOMMENDATION**

We advise that you check for possible coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0047404</b>	MW0036430	MW0036425
Sample Date		Client Info		<b>31 Jan 2024</b>	11 Jul 2023	25 Mar 2023
Machine Age	hrs	Client Info		<b>9728</b>	8384	7382
Oil Age	hrs	Client Info		<b>1280</b>	992	832
Filter Age	hrs	Client Info		<b>1280</b>	992	832
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	NORMAL	NORMAL

**WEAR**

Bearing and/or bushing wear is indicated.

Iron	ppm	ASTM D5185m	>50	<b>23</b>	5	8
Chromium	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>12	<b>&lt;1</b>	2	<1
Lead	ppm	ASTM D5185m	>17	<b>▲ 95</b>	<1	0
Copper	ppm	ASTM D5185m	>70	<b>▲ 85</b>	2	2
Tin	ppm	ASTM D5185m	>15	<b>4</b>	1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

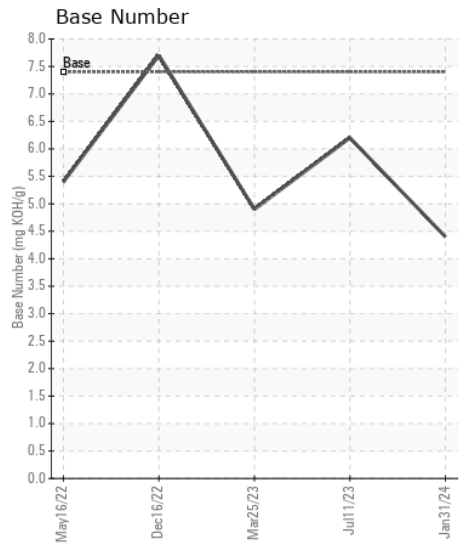
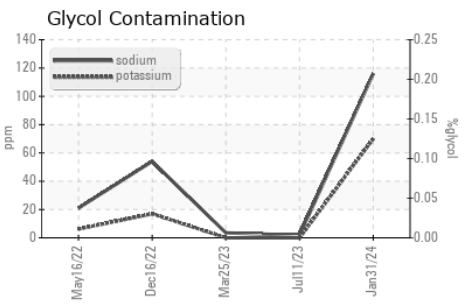
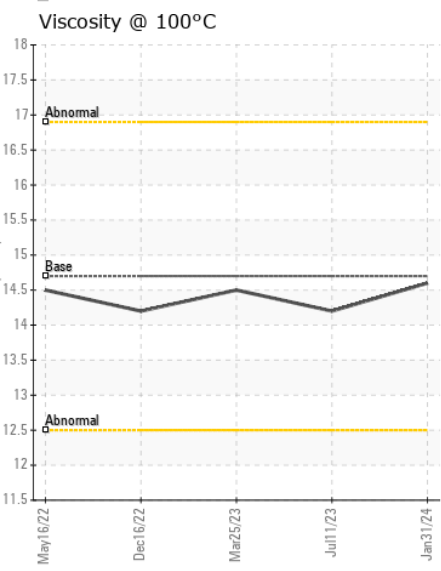
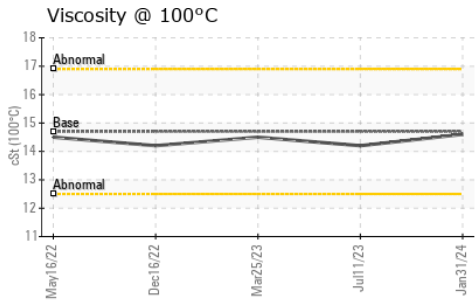
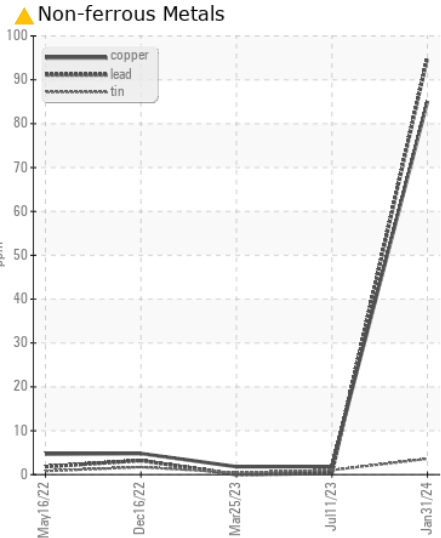
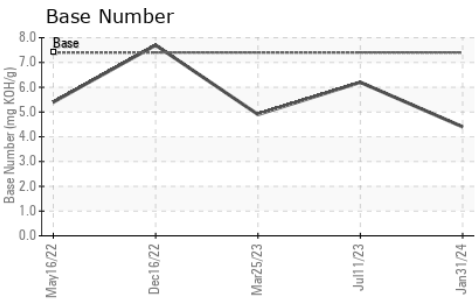
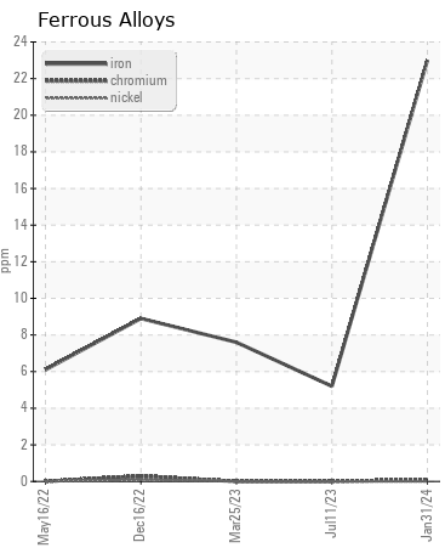
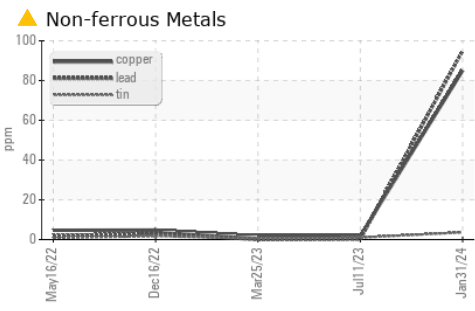
Sodium and/or potassium levels are high.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	4	4
Potassium	ppm	ASTM D5185m	>20	<b>▲ 70</b>	0	0
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol	%	*ASTM D2982		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.2</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>4.6</b>	4.2	3.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>15.6</b>	15.2	13.4
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m		<b>▲ 116</b>	2	4
Boron	ppm	ASTM D5185m		<b>159</b>	308	348
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>28</b>	31	33
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>31</b>	32	20
Calcium	ppm	ASTM D5185m		<b>1969</b>	2535	2645
Phosphorus	ppm	ASTM D5185m	1000	<b>621</b>	653	668
Zinc	ppm	ASTM D5185m	1090	<b>741</b>	782	825
Sulfur	ppm	ASTM D5185m		<b>2225</b>	3152	2902
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>7.3</b>	7.2	6.8
Base Number (BN)	mg KOH/g	ASTM D2896	7.4	<b>4.4</b>	6.2	4.9
Visc @ 100°C	cSt	ASTM D445	14.7	<b>14.6</b>	14.2	14.5



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0047404 **Received** : 07 Feb 2024  
**Lab Number** : 06083038 **Tested** : 12 Feb 2024  
**Unique Number** : 10870483 **Diagnosed** : 12 Feb 2024 - Jonathan Hester  
**Test Package** : MAR 2 ( Additional Tests: GLYCOL )

**OSAGE MARINE**  
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 F:

Certificate L2367  
 To discuss this sample report, contact Customer Service at 1-800-237-1369.  
 \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.  
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)